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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,841	12/31/2001	Toshihiko Yamashita	YAMA3020/FJD	8728
23364 7590 05/04/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			EXAMINER CHRISS, JENNIFER A	
			ART UNIT 1771	PAPER NUMBER
			MAIL DATE 05/04/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 09/926,841	Applicant(s) YAMASHITA ET AL.	
	Examiner Jennifer A. Chriss	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5,6 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-6,9-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

***Response to Amendment***

1. The Applicant's Amendments and Accompanying Remarks, filed 1/29/07, have been entered and have been carefully considered. Claim 9 is amended, claims 10 – 11 are added and claims 5 – 6 and 9 – 11 are pending. In view of Applicant's argument that Pierce does not teach convex portions opposite to and adjacent to each other, the Examiner withdraws the rejection as being obvious over Pierce as set forth in the previous Office Action. The Examiner has revised the previously applied rejection over Woodward below to clarify the rejection. Despite these advances, the invention as currently claimed is not found to be patentable for reasons herein below.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

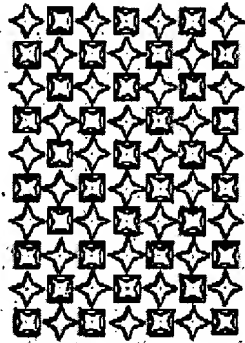
***Claim Rejections - 35 USC § 103***

3. Claims 5 – 6 and 9 – 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodward (US 165,143).

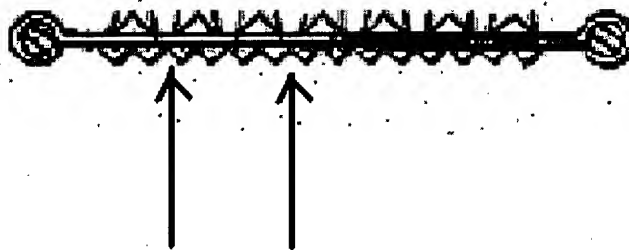
Woodward is directed to a culinary grater (Title) comprising a sheet of metal having perforations on both sides, the holes on each side alternating with depressed perforations that form the grating surface on the opposite side (column 1). It should be noted that the Examiner equates the holes alternating with depressed perforations is equated to Applicant's "concave and convex

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portions opposite to and adjacent to each other". As shown in the figure below, each perforation has a petaloid configuration consisting of 4 petal-like portions.



As shown by the arrows in the figure below, the grater has v-shaped valleys between adjacent petaloid shaped pieces.



Woodward discloses the claimed invention except for thickness is between 10 – 50 micrometers, longitudinal length of the openings is 365 – 510 microns, the lateral length of the openings being 360 – 510 micrometers, the opening ratio is between 45 – 60% and peak-to-peak dimension between adjacent convex portions is approximately 550 um. Absent a showing of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to create a substrate with a thickness of 10 – 50 micrometers, an opening length of 360 to 510 micrometers the opening ratio is between 45 – 60% and peak-to-peak dimension between adjacent convex

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portions is approximately 550 um since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the thickness, opening length and opening ratio in order to create a grater with an optimal level of porosity and rigidity.

### ***Response to Arguments***

4. Applicant's arguments filed 1/29/07 have been fully considered but they are not persuasive.

5. Applicant argues that Woodward does not teach "concave and convex portions opposite and adjacent to each other". It should be noted that Woodward teaches the holes on each side alternating with depressed perforations that form the grating surface on the opposite side (column 1). The Examiner submits that the limitation has been met.

6. Applicant argues that Woodward does not teach a petaloid shape. According to the basic definition, petaloid is a shape having petal-like elements. It should be noted in the figure above that each perforation has 4 pointed petal-like elements. The Examiner submits that the limitation has been met.

7. Applicant argues that Woodward does not teach "v-shaped valley between adjacent petaloid pieces". Please see the figure above; the arrows point to the "v-shaped valleys". The Examiner submits the limitation has been met.

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8. Applicant argues that the food grater of Woodward is not analogous art. It should be noted that the Applicant does not claim "a core member for a battery electrode". Instead, Applicant claims a generic "thin meshy porous body" which can read on many substrates including a food grater and a core member for battery electrodes. The Examiner submits that Woodward meets the claimed limitations.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

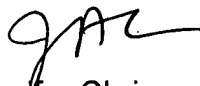
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Chriss whose telephone number is 571-272-7783. The examiner can normally be reached on Monday - Friday 8 am - 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Jennifer Chriss  
April 26, 2007



**Ms. Arti R. Singh**  
Primary Examiner  
Tech Center 1700